



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/954,564	09/17/2001	Ronnie R. Moffitt	D-2695/WOD	-7950
7590	11/24/2003		EXAMINER	
William O'Driscoll - 12-1 The Trane Company 3600 Pammel Creek Road La Crosse, WI 54601			CIRIC, LJILJANA V	
			ART UNIT	PAPER NUMBER
			3753	
DATE MAILED: 11/24/2003				

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/954,564	Applicant(s) Moffitt
	Examiner Ljiljana V. Ciric	Art Unit 3753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on Aug 26, 2003.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-37 is/are pending in the application.

4a) Of the above, claim(s) 12-23 and 25-29 is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-11, 24, and 30-37 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on Nov 17, 2001 is/are a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) Notice of References Cited (PTO-892)

4) Interview Summary (PTO-413) Paper No(s). _____

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

5) Notice of Informal Patent Application (PTO-152)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s). 6

6) Other: _____

Art Unit: 3743

DETAILED ACTION

Election/Restriction

1. Applicant's election without traverse of Group I, readable on claims 1 through 11 and 30 through 37, in Paper No. 8 is acknowledged. Claims 1 through 11, 24, and 30 through 37 are thus under consideration in this Office action.
2. Claims 12 through 23 and 25 through 29 are hereby withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made without traverse in Paper No. 8.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the following must be shown or the feature(s) canceled from the claim(s), for example: a first airflow monitor as recited in claim 5; a second airflow monitor as recited in claim 7; a divider wall *between* the bathroom exhaust airstream path and the return airstream path as recited in each of claims 9, 30, and 34 (note that divider wall 50 is shown in Figure 1, but not between the bathroom exhaust airstream 90 and the return airstream path 92); and, an airflow monitor as recited in each of claims 31 and 35. Note that, while Figure 1 does show reference number 34 corresponding to an airflow monitor and reference number 86 corresponding to an airflow sensor, neither the airflow monitor 34 nor the airflow sensor 86 is shown in the drawing. No new matter should be entered. A proposed drawing correction or corrected drawings are required in reply

Art Unit: 3743

to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "32" and "34" appear to have both been used to designate damper 32 in Figure 1. Similarly, reference characters "84" and "86" appear to have both been used to designate damper 84. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

5. The abstract of the disclosure is objected to because the second sentence is a run-on sentence and because it does not avoid using the legal phraseology often used in claims (i.e., "comprises" appears in line 2 of the abstract). Correction is required. See MPEP § 608.01(b).

6. The use of the trademarks such as "Modular Climate Changer" [page 1, line 28] and "Traq" [page 7, lines 18 and 21] has been noted in this application. Trademarks should be capitalized wherever they appear and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Claim Objections

7. Claims 1 through 11 and 30 through 37 are objected to because of the following informalities, for example: "for" should be inserted immediately preceding "transferring" [claim 1, line 9; claim 30, line 7; claim 34, line 7] for improved readability; "the modulation device" [claim 6, line 3] should be

Art Unit: 3743

replaced with “the modulating device” for improved clarity and readability; “*the motivating force*” [claim 8, line 2; claim 10, line 2] should be replaced with “*a* motivating force” for improved clarity and readability; and, “*a*” should be inserted immediately preceding “motivating force” [claim 33, line 2; claim 37, line 2] for improved grammatical correctness and readability. Appropriate correction is required.

Claim Rejections - 35 U.S.C. § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 5 through 11, 24, 32, 33, 36, and 37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With regard to claim 5 as written, the intended scope of protection sought by the limitations “includes a first modulating device such as a damper and a first airflow monitor” is not clear, thus rendering indefinite claim 5 and all claims depending therefrom. First of all, it is not clear whether the first modulating device encompasses, for example, a damper AND a first airflow monitor in combination or only a damper. Second of all, these limitations appear to recite a broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation in the same claim as noted in greater detail immediately following.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim

Art Unit: 3743

does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 6 recites the broad recitation of a first modulating device, and the claim also recites either a damper or a damper in combination with an airflow monitor, which is the narrower statement of the range/limitation.

The limitations "a single exhaust fan provides the *motivating force* for both the bathroom exhaust airflow *path* and the return airflow *path*" in claim 8 are unclear and idiomatically incorrect as written; a fan may accurately be described as providing a motivating force for air or for an airflow but not for a path or paths per se. Claims 33 and 37 contain the same or similarly worded limitations and are similarly idiomatically unclear as written.

While claim 11 recites that the heat recovery device "sequentially extracts heat first from the bathroom exhaust airflow path and then from the return airflow path", yet no particular structure necessary for accomplishing this process step is recited in the claims, thus rendering claim 11 incomplete. Claim 11 also appears to attempt to recite a method or process step in an

Art Unit: 3743

apparatus claim, thus further rendering the metes and bounds of protection sought by the claim indefinite.

Applicant is reminded that although 35 U.S.C. 112, sixth paragraph, statutorily provides that one may use means-plus-function language in a claim, one is still subject to the requirement that a claim particularly point out and distinctly claim the invention. Therefore, if one employs means-plus-function language in a claim, one must set forth in the specification an adequate disclosure showing what is meant by that language. In the instant application, regarding claim 24, it is not clear which equivalent element(s) in the written description correspond to the “means for handling air” as cited in line 3 of the claim. Does this means-plus-function clause correspond to the housing or to the exhaust fan? Similarly, it is not clear whether the means-plus-function limitations “means for extracting heat from the system exhaust and bathroom exhaust airflow paths” and “means for transferring the extracted heat to the outside air flow path” both refer to the same element, i.e., to air-to-air heat exchanger 12, in which case these two limitations represent an improper double recitation, or whether only one of these limitations refers to the air-to-air heat exchanger, while the other one of these limitation refers to some other undetermined element. Claim 24 thus contains plural means-plus-function clauses which do not have clear support or antecedent basis in the written description to satisfy the requirements of 35 U.S.C. 112, second paragraph. See *Donaldson*, 16 F.3d at 1195, 29 USPQ2d at 1850; see also *B. Braun Medical, Inc. v. Abbott Lab.*, 124 F.3d 942, 946, 42 USPQ 2d 1881, 1884085 (Fed. Cir. 1997).

Art Unit: 3743

Each of claims 32 and 36 recites the system as “further including a relief damper *working in conjunction with the airflow control damper to balance the pressure between the bathroom exhaust airstream path and the return airstream path*”, yet no particular structure is recited in the claims operably connecting the relief damper to airflow control damper. Furthermore, the aforementioned limitations appear to attempt to recite method steps in apparatus claims, thus further rendering indefinite the metes and bounds of protection sought by the claims.

The above is an indicative, but not necessarily an exhaustive, list of 35 U.S.C. 112, second paragraph, problems. Applicant is therefore advised to carefully review all of the claims for additional problems. Correction is required of all of the 35 U.S.C. 112, second paragraph problems, whether or not these were particularly pointed out above.

Claim Rejections - 35 U.S.C. § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. As best can be understood in view of the indefiniteness of claims 10, 11, and 24, claims 1 through 4, 10, 11, and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by *Taylor*.

Taylor discloses a heat recovery arrangement essentially as claimed, including, for example: a housing 10 including two inlets 24 and a corresponding outlet 28, as well as corresponding airflow paths therebetween; another inlet 26 and a corresponding outlet 30, as well

Art Unit: 3743

a corresponding airflow path therebetween, with inlet 26 being readable on the outside air inlet and outlet 30 being readable on the supply air outlet as recited in claim 1 of the instant application; a heat recovery device or heat exchange panel 32; and, a single fan 44 for providing the motivating force for the airflow entering via inlets 24 and exiting via outlet 28. Heat exchanger 32 is readable on the means for transferring and extracting heat as recited in claim 24 of the instant application, whereas housing 10 is readable on the means for handling air as recited in the same claim.

The reference thus reads on the claims.

12. Alternately for claims 1 through 4, 10, and 11 and as best can be understood in view of the indefiniteness of claims 5 through 11, claims 1 through 11, 30 through 32, and 34 through 36 are rejected under 35 U.S.C. 102(b) as being anticipated by *F.E. Dzerzhinskii Thermo-Technology Research Institute (SU 320,676)*.

F.E. Dzerzhinskii Thermo-Technology Research Institute (SU 320,676) discloses a heat recovery arrangement or energy recovery system essentially as claimed, including, for example: plural airflow paths through a housing; a heat transfer device or heat recovery device 1; first and second modulating devices or dampers or butterfly valves 6; and, a divider wall 4. One or more airflow monitors are inherent in order to ensure that butterfly valves 6 are operated to provide the necessary air flow rates through the various sections of the arrangement or system. Generally, little or no patentable weight is given to functional limitations in the claims.

The reference thus reads on the claims.

Art Unit: 3743

13. Alternately for claims 30 through 32 and 34 through 36, and as best can be understood in view of the indefiniteness of claims 32, 33, 36, and 37, claims 30 through 37 are rejected under 35 U.S.C. 102(b) as being anticipated by *Besik*.

Besik [especially Figure 1] discloses a heat recovery arrangement or an energy recovery system essentially as claimed, including, for example: two air flow paths 20 and 22 with a divider wall 12 or 212 therebetween; a third airflow path 21; a heat transfer device or cooler 2; plural airflow dampers 19a, 19b, 19c, and 19d; airflow monitors and sensors associated with processor 4; and a single fan 3. Generally, little or no patentable weight is accorded to functional limitations in the claims.

The reference thus reads on the claims.

Claim Rejections - 35 U.S.C. § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Alternately and as best can be understood in view of the indefiniteness of the claim, claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Taylor*.

Taylor discloses an arrangement for recovering energy essentially as claimed, including, for example: means for handling air readable on housing 10; means for providing two exhaust

Art Unit: 3743

paths between inlets 24 and outlet 28 to the air handler means or housing 10 [see Figure 2]; means for providing an outside airflow path between inlet 26 and outlet 30 through the air handler means or housing 10 [see Figure 2]; and a heat exchanger 32 readable on the means for transferring and extracting heat. While *Taylor* does not per se disclose one of the merging airflow paths flowing into the housing 10 via inlets 24 as corresponding to a bathroom exhaust path and the other of the two airflow paths as corresponding to a building exhaust airflow path, the energy recovery arrangement of *Taylor* may be used in a variety of applications, wherein the inlets 24 are connected to any number of room exhausts.

Thus, it would have been obvious to one skilled in the art at the time of invention to modify the energy recovery arrangement of *Taylor* so as to have one of the inlets 24 connected to a bathroom exhaust and the other of the inlets 24 to a general building exhaust, for example, in order to efficiently extract heat from all building heat sources at the same time.

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. *Berner, Astle, Jr. (both references), Sotani et al., Olmstead et al., Laine et al., Castonguay, Roy, Meckler, Oas et al., Dunlap, Maschinenfabrik Augsburg-Nurnberg AG, and Seibu Giken K.K.* each discloses an energy recovery arrangement or system including plural air paths and a heat recovery device operably connected to these.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ljiljana (Lil) V. Cric, whose telephone number is (703) 308-3925.

Art Unit: 3743

While she works a flexible schedule that varies from day to day and from week to week, Examiner Cirim may generally be reached at the Office during the work week between the hours of 10 a.m. and 6 p.m. ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Scherbel, can be reached on (703) 308-1272.

The NEW central official fax phone number is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0861.

lvc

November 14, 2003


LJILJANA V. CIRIC
PRIMARY EXAMINER
ART UNIT 3753